

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2004/000714

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: F16L 47/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: F16L, F16B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3502355 A (H.W. DEMLER, SR. ET AL), 24 March 1970 (24.03.1970), column 4, line 52 - column 5, line 5, figures 7-10 --	1
Y	AU 35181 A (JOHN BRIAN O'HAIR ET AL), 3 May 1973 (03.05.1973), figure A --	1
Y	US 2484644 A (O.J. POUPITCH), 11 October 1949 (11.10.1949), figures 1-3 --	1
Y	US 3856065 A (GEHRING), 24 December 1974 (24.12.1974), figures 1-2 --	1

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

10 March 2005

Date of mailing of the international search report

11-03-2005

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86Authorized officer
Inger Löfving / JA A
Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2004/000714

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4154466 A (SIMMONS), 15 May 1979 (15.05.1979), column 3, line 32 - column 4, line 22, figures 2-3 -- -----	10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/FI 2004/000714

US	3502355	A	24/03/1970	NONE			
AU	35181	A	03/05/1973	NONE			
US	2484644	A	11/10/1949	NONE			
US	3856065	A	24/12/1974	NONE			
US	4154466	A	15/05/1979	AU	514698 B	19/02/1981	
				AU	3206977 A	05/07/1979	
				CA	1082247 A	22/07/1980	
				CA	1102847 A	09/06/1981	
				CA	1102848 A	09/06/1981	
				CA	1118469 A	16/02/1982	
				FR	2376354 A,B	28/07/1978	
				GB	1600608 A	21/10/1981	
				GB	1600609 A	21/10/1981	
				GB	1600610 A	21/10/1981	
				IE	46637 B	10/08/1983	
				IE	46638 B	10/08/1983	
				IE	46639 B	10/08/1983	
				IE	772648 L	03/07/1978	
				IE	812783 L	03/07/1978	
				IE	812784 L	03/07/1978	
				JP	53089021 A	05/08/1978	
				MY	45986 A	31/12/1986	
				MY	46086 A	31/12/1986	
				MY	97685 A	31/12/1985	
				NL	185238 B,C	18/09/1989	
				NL	7713919 A	05/07/1978	
				NO	161820 B,C	19/06/1989	
				NO	774200 A	04/07/1978	
				SG	84984 G	07/06/1985	
				SG	85084 G	07/06/1985	
				SG	85284 G	07/06/1985	
				US	RE31123 E	11/01/1983	